VOLUME 24
LIST OF CONTENTS

Number 1

Mark A. McCaffrey — 3 — Pieter Schenck Award, acceptance speech (with an introduction by J. Michael Moldowan)

Review Paper

A. E. Bence, K. A. Kvenvolden and M. C. Kennicutt, II — 7 — Organic geochemistry applied to environmental assessments of Prince William Sound, Alaska, after the Exxon Valdez oil spill—a review

Imam B. Sosrowidjojo, Andrew P. Murray, Robert Alexander, Robert I. Kagi and Roger E. Summons — 43 — Bicadinanes and related compounds as maturity indicators for oils and sediments

Leroy Ellis, Tom A. Langworthy and Randall Winans — 57 — Occurrence of phenylalkanes in some Australian crude oils and sediments

Kenneth R. Grzyb — 71 — NOAEM (natural organic anion equilibrium model): a data analysis algorithm for determining functional properties of dissolved organic matter in aqueous environments: Part II. Organic chemical association

Anne C. Sigleo — 83 — Biochemical components in suspended particles and colloids: carbohydrates in the Potomac and Patuxent Estuaries

Wuu-Liang Huang — 95 — A new pyrolysis technique using a diamond anvil cell: in situ visualization of kerogen transformation

Book Review

Keith A. Kvenvolden — 109 — Petroleum Geochemistry and Geology by John M. Hunt

Number 2

COLLECTED PAPERS FROM

THE TWELFTH ANNUAL MEETING OF THE SOCIETY FOR ORGANIC PETROLOGY

William H. Orem, Sandra G. Neuzil, Harry E. Lerch and C. Blaine Cecil — 111 — Experimental early-stage coalification of a peat sample and a peatified wood sample from Indonesia

J. C. Shearer and T. A. Moore	127	Effects of experimental coalification on texture, composition and compaction in Indonesian peat and wood
Catherine Chagué-Goff and William S. Fyfe	141	Geochemical and petrographical characteristics of a domed bog, Nova Scotia: a modern analogue for temperate coal deposits
Peng Suping and Romeo M. Flores	159	Modern Pearl River Delta and Permian Huainan coalfield, China: a comparative sedimentary facies study
Brenda S. Pierce	181	Quality and petrographic characteristics of Paleocene coals from the Hanna basin, Wyoming
Zhengping Wang, James C. Hower, John C. Ferm and Garry D. Wild	189	Characteristics of lithotype thickness and sequential association of some Kentucky coals
Peter D. Warwick, Sharon S. Crowley, Leslie F. Ruppert and James Pontolillo	197	Petrography and geochemistry of the San Miguel lignite, Jackson Group (Eocene), south Texas
Adrian C. Hutton, Uschi M. Graham, James C. Hower, Robert F. Rathbone and Thomas L. Robl	219	Petrography of pyrolysis and pyrolysis–steam retorted residues from the alpha torbanite and the alpha cannel coal
C. Wm. Keighin, Romeo M. Flores and Terry Rowland	227	Occurrence and morphology of carbonate concretions in the Beulah–Zap coal bed, Williston Basin, North Dakota
Wuu-Liang Huang	233	Experimental study of vitrinite maturation: effects of temperature, time, pressure, water, and hydrogen index
Karen Rose Cercone, David Deming and Henry N. Pollack	243	Insulating effect of coals and black shales in the Appalachian Basin, Western Pennsylvania
Charles E. Barker	251	A comparison of vitrinite reflectance measurements made on whole-rock and dispersed organic matter concentrate mounts
Vaughn D. Robison, Louis M. Liro, Coleman R. Robison, William C. Dawson and John W. Russo	257	Integrated geochemistry, organic petrology, and sequence stratigraphy of the Triassic Shublik Formation, Tenneco Phoenix 1 well, North Slope, Alaska, U.S.A.
	i	Announcements
	vii	Forthcoming Papers
	viii	EAOG Travel Scholarships

Number 3

Yongsong Huang, Roland Bol, Douglas D. Harkness, Philip Ineson and Geoffrey Eglinton — 273 — Post-glacial variations in distributions, ^{13}C and ^{14}C contents of aliphatic hydrocarbons and bulk organic matter in three types of British acid upland soils

Yongsong Huang, Matthew J. Lockheart, Graham A. Logan and Geoffrey Eglinton — 289 — Isotope and molecular evidence for the diverse origins of carboxylic acids in leaf fossils and sediments from the Miocene Lake Clarkia deposit, Idaho, U.S.A.

Maria Mastalerz and James C. Hower — 301 — Elemental composition and molecular structure of Botryococcus alginite in Westphalian cannel coals from Kentucky

A. G. Borrego, H. W. Hagemann, J. G. Prado, M. D. Guillén and C. G. Blanco — 309 — Comparative petrographic and geochemical study of the Puertollano oil shale kerogens

B. C. Deaton and William L. Balsam — 323 — Determination of metalloporphyrins in rocks, sediments and other geological materials using total reflectance spectrophotometry

Gary H. Isaksen — 333 — Organic geochemistry and geohistory of the Triassic succession of Bjørnøya, Barents Sea

Amane Waseda, Yoshiteru Kajiwara, Hideki Nishita and Hirotsugu Iwano — 351 — Oil–source rock correlation in the Tempoku basin of northern Hokkaido, Japan

Hao Fang, Li Sitian, Sun Yongchuan and Zhang Qiming — 363 — Characteristics and origin of the gas and condensate in the Yinggehai Basin, offshore South China Sea: evidence for effects of overpressure on petroleum generation and migration

Bernd R. T. Simoneit, R. N. Leif and R. Ishiwatari — 377 — Phenols in hydrothermal petroleums and sediment bitumen from Guaymas Basin, Gulf of California

Note

A. N. Buckley, K. W. Riley and M. A. Wilson — 389 — Heteroatom functionality in a high-sulfur Chinese bituminous coal

Douglas Waples — 393 — Comment on "A multicomponent oil-cracking kinetics models for modeling preservation and composition of reservoired oils" by L.-C. Kuo and G. E. Michael, Org. Geochem. 21, 911–925 (1994)

Lung-Chuan Kuo and G. Eric Michael — 397 — Reply to comments by D. Waples on the paper "A multicomponent oil-cracking kinetics model for modeling preservation and composition of reservoired oils" by L.-C. Kuo and G. E. Michael, Org. Geochem. 21, 911–925 (1994)

i — Announcements

vii — Forthcoming Papers

viii — EAOG Travel Scholarships

Number 4

PROCEEDINGS OF THE 17TH INTERNATIONAL MEETING ON ORGANIC GEOCHEMISTRY

PART I
PALAEOCLIMATE AND PALAEOCEANOGRAPHY

V Preface

VII Preface

I. Bentaleb, M. Fontugne, C. Descolas-Gros, C. Girardin, A. Mariotti, C. Pierre, C. Brunet and A. Poisson — **399 Organic carbon isotopic composition of phytoplankton and sea-surface pCO_2 reconstructions in the Southern Indian Ocean during the last 50,000 yr**

Ph. Martinez, Ph. Bertrand, I. Bouloubassi, G. Bareille, G. Shimmield, B. Vautravers, F. Grousset, S. Guichard, Y. Ternois and M.-A. Sicre — **411 An integrated view of inorganic and organic biogeochemical indicators of palaeoproductivity changes in a coastal upwelling area**

C. J. Schubert and R. Stein — **421 Deposition of organic carbon in Arctic Ocean sediments: terrigenous supply vs marine productivity**

Andreas Lückge, Mohammed Boussafir, Elisabeth Lallier-Vergès and Ralf Littke — **437 Comparative study of organic matter preservation in immature sediments along the continental margins of Peru and Oman. Part I: Results of petrographical and bulk geochemical data**

D. Ariztegui, P. Farrimond and J. A. McKenzie — **453 Compositional variations in sedimentary lacustrine organic matter and their implications for high Alpine Holocene environmental changes: Lake St. Moritz, Switzerland**

James E. Silliman, Philip A. Meyers and Richard A. Bourbonniere — **463 Record of postglacial organic matter delivery and burial in sediments of Lake Ontario**

i Announcements

vii Forthcoming Papers

viii EAOG Travel Scholarships

Number 5

Adria C. T. van Duin, Torren M. Peakman, Jan W. de Leeuw and Bastiaan van de Graaf — **473 Novel aspects of the diagenesis of Δ^7-5α-sterenes as revealed by a combined molecular mechanics calculations and laboratory simulations approach**

B. Artur Stankiewicz, Michael A. Kruge, Maria Mastalerz and Gary L. Salmon — **495 Geochemistry of the alginite and amorphous organic matter from Type II-S kerogens**

Kazuhide Hayakawa, Nobuhiko Handa, Naoko Ikuta and Mitsuo Fukuchi 511 Downward fluxes of fatty acids and hydrocarbons during a phytoplankton bloom in the austral summer of Breid Bay, Antarctica

H. S. Shin, S. W. Rhee, B. H. Lee and C. H. Moon 523 Metal binding sites and partial structures of soil fulvic and humic acids compared: aided by Eu(III) luminescence spectroscopy and DEPT/QUAT ^{13}C NMR pulse techniques

B. Artur Stankiewicz, Michael A. Kruge and Maria Mastalerz 531 A geochemical study of macerals from a Miocene lignite and an Eocene bituminous coal, Indonesia

Peirong Wang, Maowen Li and Steve R. Larter 547 Extended hopanes beyond C_{40} in crude oils and source rock extracts from the Liaohe Basin, N.E. China

Yuko Soma, Atsushi Tanaka, Mitsuyuki Soma and Takayoshi Kawai 553 Photosynthetic pigments and perylene in the sediments of southern basin of Lake Baikal

J. A. Curiale and B. W. Bromley 563 Migration of petroleum into Vermilion 14 field, Gulf Coast, U.S.A.—molecular evidence

Notes

Linda L. King and Stuart G. Wakeham 581 Phorbin steryl ester formation by macrozooplankton in the Sargasso Sea

Adri C. T. van Duin, Bart Hollanders, René J. A. Smits, Jan M. A. Baas, Bastiaan van de Graaf, Martin P. Koopmans, Jaap S. S. Damsté and Jan W. de Leeuw 587 Molecular mechanics calculation of the rotational barriers of 2,2′,6-trialkylbiphenyls to explain their GC-elution behaviour

i Announcements

vii Forthcoming Papers

viii EAOG Travel Scholarships

Numbers 6/7

PROCEEDINGS OF THE 17TH INTERNATIONAL MEETING ON ORGANIC GEOCHEMISTRY

PART II
BIOPOLYMERS AND MACROMOLECULES

V Preface

VII Introduction

Patrick G. Hatcher and Robert D. Minard 593 Comparison of dehydrogenase polymer (DHP) lignin with native lignin from gymnosperm wood by thermochemolysis using tetramethylammonium hydroxide (TMAH)

Miguel A. Goñi and Timothy I. Eglinton	601	Stable carbon isotopic analyses of lignin-derived CuO oxidation products by isotope ratio monitoring–gas chromatography–mass spectrometry (irm–GC–MS)
Sylvie Derenne, Claude Largeau and Claire Berkaloff	617	First example of an algaenan yielding an aromatic-rich pyrolysate. Possible geochemical implications on marine kerogen formation
Jasper D. H. van Heemst, Sophie Peulvé and Jan W. de Leeuw	629	Novel algal polyphenolic biomacromolecules as significant contributors to resistant fractions of marine dissolved and particulate organic matter
D. E. McKinney, J. M. Bortiatynski, D. M. Carson, D. J. Clifford, J. W. de Leeuw and P. G. Hatcher	641	Tetramethylammonium hydroxide (TMAH) thermochemolysis of the aliphatic biopolymer cutan: insights into the chemical structure
G. Almendros, M. E. Guadalix, F. J. González-Vila and F. Martin	651	Preservation of aliphatic macromolecules in soil humins
Heike Knicker, Alan W. Scaroni and Patrick G. Hatcher	661	^{13}C and ^{15}N NMR spectroscopic investigation on the formation of fossil algal residues
B. Gillaizeau, S. Derenne, C. Largeau, C. Berkaloff and B. Rousseau	671	Source organisms and formation pathway of the kerogen of the Göynük Oil Shale (Oligocene, Turkey) as revealed by electron microscopy, spectroscopy and pyrolysis
Andre Amblès, Laurent Grasset, Germaine Dupas and Jean-Claude Jacquesy	681	Ester- and ether bond cleavage in immature kerogens
B. Huseby, R. Ocampo, C. Bauder, H. J. Callot, K. Rist and T. Barth	691	Study of the porphyrins released from the Messel oil shale kerogen by hydrous pyrolysis experiments
François Gelin, Jaap S. Sinninghe Damsté, Wayne N. Harrison, Christine Reiss, James R. Maxwell and Jan W. de Leeuw	705	Variations in origin and composition of kerogen constituents as revealed by analytical pyrolysis of immature kerogens before and after desulphurization
Keith Fisher, Claude Largeau and Sylvie Derenne	715	Can oil shales be used to produce fullerenes?
José V. Ibarra, Edgar Muñoz and Rafael Moliner	725	FTIR study of the evolution of coal structure during the coalification process
Michael A. Kruge, Patrick Landais and David Bensley	737	Artificial maturation of alginite and organic groundmass separated from torbanites
	i	Erratum
	iii	Announcements
	vii	Forthcoming Papers
	viii	EAOG Travel Scholarships

Numbers 8/9

Ken Sawada, Nobuhiko Handa, Yoshihiro Shiraiwa, Akiko Danbara and Shigeru Montani — 751 — Long-chain alkenones and alkyl alkenoates in the coastal and pelagic sediments of the northwest North Pacific, with special reference to the reconstruction of Emiliania huxleyi and Gephyrocapsa oceanica ratios

Kenneth E. Peters, J. Michael Moldowan, Mark A. McCaffrey and Frederick J. Fago — 765 — Selective biodegradation of extended hopanes to 25-norhopanes in petroleum reservoirs. Insights from molecular mechanics

F. E. Casareo, S. C. George, B. D. Batts and P. J. Conaghan — 785 — The effects of varying tissue preservation on the aliphatic hydrocarbons within a high-volatile bituminous coal

Pavle I. Premović, Ljubiša S. Jovanović and Goran S. Nikolić — 801 — Thermal stability of the asphaltene/kerogen vanadyl porphyrins

Qu Dingchuang, Shi Jiyang and Xiang Mingju — 815 — Novel extended side-chain-unsaturated hopenes released from the kerogen macromolecules under artificial conditions

J.-F. Rontani, D. Raphel and P. Cuny — 825 — Early diagenesis of the intact and photooxidized chlorophyll phytyl chain in a recent temperate sediment

V. Grossi, M. Baas, N. Schogt, W. C. M. Klein Breteler, J. W. de Leeuw and J.-F. Rontani — 833 — Formation of phytadienes in the water column: myth or reality?

Yahya Zegouagh, Sylvie Derenne, Claude Largeau and Alain Saliot — 841 — Organic matter sources and early diagenetic alterations in Arctic surface sediments (Lena River delta and Laptev Sea, Eastern Siberia)—I. Analysis of the carboxylic acids released via sequential treatments

Riwandi Sihombing, Paul F. Greenwood, Michael A. Wilson and John V. Hanna — 859 — Composition of size exclusion fractions of swamp water humic and fulvic acids as measured by solid state NMR and pyrolysis–gas chromatography–mass spectrometry

Y. Qian, M. C. Kennicutt II, J. Svalberg, S. A. Macko, R. R. Bidigare and Jane Walker — 875 — Suspended particulate organic matter (SPOM) in Gulf of Mexico estuaries: compound-specific isotope analysis and plant pigment compositions

Tanja Barth, Kristin Rist, Berit Huseby and Ruben Ocampo — 889 — The distribution of nitrogen between bitumen, water and residue in hydrous pyrolysis of extracted Messel oil shale

Michael A. Kruge, Maria Mastalerz, Andrzej Solecki and B. Artur Stankiewicz — 897 — Organic geochemistry and petrology of oil source rocks, Carpathian Overthrust region, southeastern Poland—implications for petroleum generation

J. W. Collister and D. A. Wavrek — 913 — $\delta^{13}C$ compositions of saturate and aromatic fractions of lacustrine oils and bitumens: evidence for water column stratification

Naomi Harada, Nobuhiko Handa, Masahiko Ito, Tadamichi Oba and Eiji Matsumoto — 921 Chronology of marine sediments by the racemization reaction of aspartic acid in planktonic foraminifera

Chen Jianyu, Bi Yanpong, Zhang Jiguo and Li Shuafu — 931 Oil-source correlation in the Fulin basin, Shengli petroleum province, East China

Note
Istvan Devai and Ronald D. DeLaune — 941 Evaluation of various solid adsorbents for sampling trace levels of methanethiol

Book Review
R. V. Tyson — 945 Paleogeography, Paleoclimate, and Source Rocks, edited by A.-Y. Huc

i Erratum

iii EAOG Newsletter V

vii Announcements

viii Forthcoming Papers

ix EAOG Travel Scholarships

Numbers 10/11

PROCEEDINGS OF THE 17TH INTERNATIONAL MEETING ON ORGANIC GEOCHEMISTRY

PART III
ORIGIN OF NATURAL GASES—PETROLEUM GEOCHEMISTRY: IMPACT OF ORGANIC GEOCHEMISTRY ON EXPLORATION—MIGRATION AND EXPULSION OF OIL AND GAS

V Preface

VII Introduction

Origin of Natural Gases
Ulrich Berner and Eckhard Faber — 947 Empirical carbon isotope/maturity relationships for gases from algal kerogens and terrigenous organic matter, based on dry, open-system pyrolysis

H. L. ten Haven — 957 Applications and limitations of Mango's light hydrocarbon parameters in petroleum correlation studies

Frank D. Mango — 977 Transition metal catalysis in the generation of natural gas

G. Everlien — 985 High-temperature programmed pyrolysis of Paleozoic source rocks from Northern Germany and adjacent areas and its thermodynamic constraints

R. di Primio and B. Horsfield — 999 — Predicting the generation of heavy oils in carbonate/evaporitic environments using pyrolysis methods

Petroleum Geochmistry: Impact of Organic Geochemistry on Exploration

A. G. Requejo, R. Sassen, T. McDonald, G. Denoux, M. C. Kennicutt II and J. M. Brooks — 1017 — Polynuclear aromatic hydrocarbons (PAH) as indicators of the source and maturity of marine crude oils

Kenneth E. Peters, Alan E. Cunningham, Clifford C. Walters, Jiang Jigang and Fan Zhaoan — 1035 — Petroleum systems in the Jiangling–Dangyang area, Jianghan Basin, China

E. B. Frolov, V. A. Melikhov and M. B. Smirnov — 1061 — Radiolytic nature of n-alkene/n-alkane distributions in Russian Precambrian and Palaeozoic oils

Bernd R. T. Simoneit and John C. Fetzer — 1065 — High molecular weight polycyclic aromatic hydrocarbons in hydrothermal petroleums from the Gulf of California and Northeast Pacific Ocean

Migration and Expulsion of Oil and Gas

A. Werner, F. Behar, J. C. de Hemptinne and E. Behar — 1079 — Thermodynamic properties of petroleum fluids during expulsion and migration from source rocks

i Announcements

iii Forthcoming Papers

v EAOG Travel Scholarships

Number 12

PROCEEDINGS OF THE 17TH INTERNATIONAL MEETING ON ORGANIC GEOCHEMISTRY

PART IV
RESERVOIR AND PRODUCTION GEOCHEMISTRY

V Preface

VII Introduction

J. A. Curiale and B. W. Bromley — 1097 — Migration induced compositional changes in oils and condensates of a single field

B. Carpentier, P. Ungerer, I. Kowalewski, C. Magnier, J. P. Courcy and A. Y. Huc — 1115 — Molecular and isotopic fractionation of light hydrocarbons between oil and gas phases

E. Lafargue and P. Le Thiez — 1141 — Effect of waterwashing on light ends compositional heterogeneity

Lene Madsen, Laila Grahl-Madsen, Christian Grøn, Ida Lind and John Engell — 1151 Adsorption of polar aromatic hydrocarbons on synthetic calcite

A. Wilhelms, I. Horstad and D. Karlsen — 1157 Sequential extraction—a useful tool for reservoir geochemistry?

W. O. BeMent, R. I. McNeil and R. G. Lippincott — 1173 Predicting oil quality from sidewall cores using PFID, TEC, and NIR analytical techniques in sandstone reservoirs, Rio Del Rey Basin, Cameroon

A. G. Holba, L. I. P. Dzou, J. J. Hickey, S. G. Franks, S. J. May and T. Lenney — 1179 Reservoir geochemistry of South Pass 61 Field, Gulf of Mexico: compositional heterogeneities reflecting filling history and biodegradation

i Announcements

iii Forthcoming Papers

v EAOG Travel Scholarships